



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS



# Transportation & Distribution Information Systems (TDIS)

Joseph W. Rothrock  
(703) 432-5121, DSN 378-

5121

FAX (703) 432-5184



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

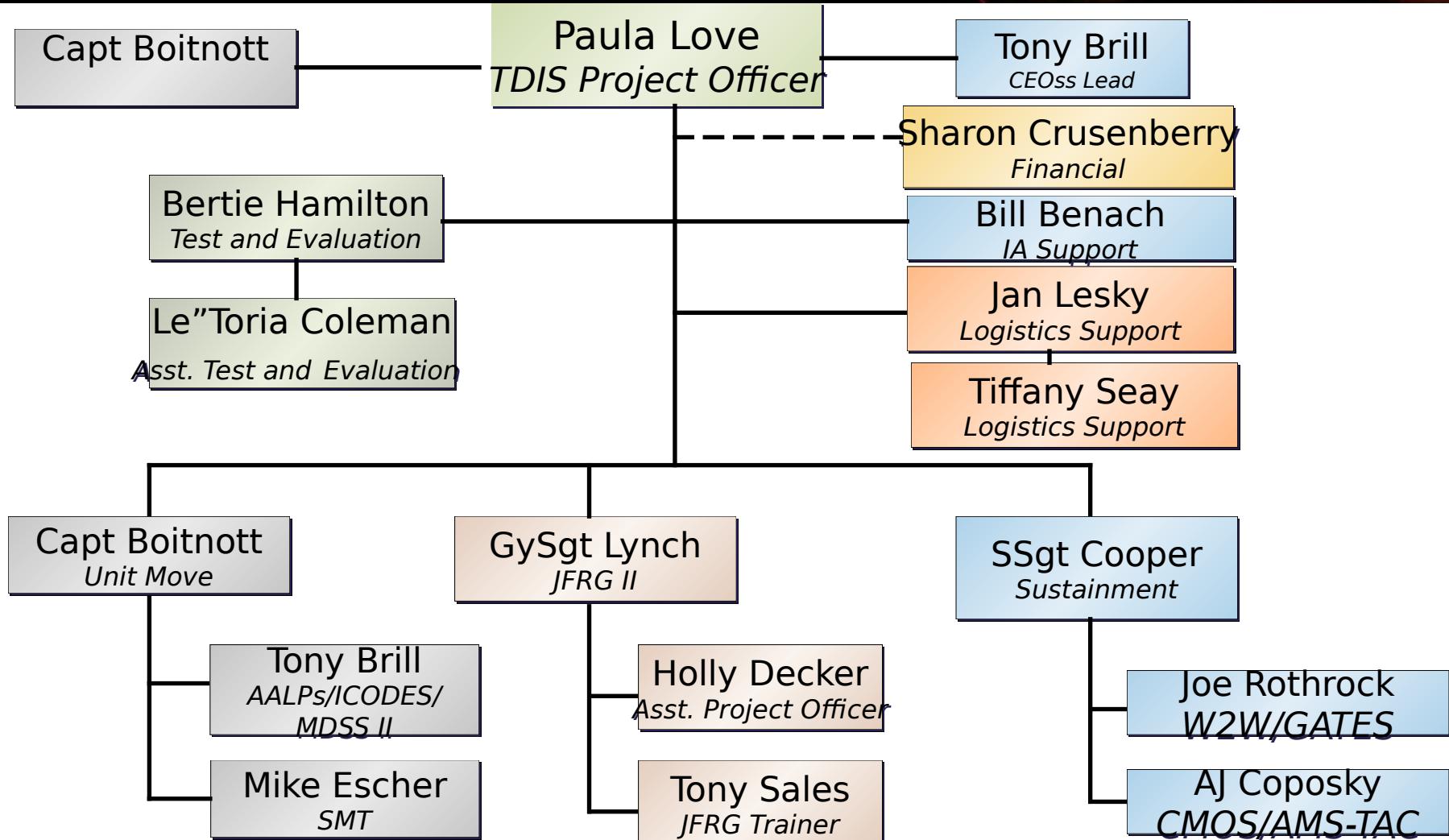
# Mission

***To develop, provide, and maintain integrated logistics systems that improve transportation, FDP&E, AIT, and distribution services to the Warfighter in a deployed and garrison environment, enhancing their war fighting capability.***



# MARINE CORPS SYSTEMS COMMAND

## UNITED STATES MARINE CORPS





MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

TDIS Applications



- ◆ **AMS-TAC - Automated Manifest System - Tactical**
- ◆ **CMOS - Cargo Movement Operations System**
- ◆ **W2W - Warehouse to War fighter**
- ◆ **Future Plans include integration of life cycle management responsibilities for:**
  - **TOPS, AGTR, GATES, Power track, GFM**
    - ◆ **Manpower and Funding Resources**



## ◆ AMS-TAC Current

- Fielded version 3.0.7
- Testing complete for version 3.1
  - ◆ SSAA/IA documentation in process
  - ◆ NMCI Certification pending resolution of challenges
    - Peer-to Peer or mapping is in violation of NMCI business rules
    - Using Unit budget for appropriate NMCI Seat assignment
    - Establishing seat assignments



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

AMS-TAC



## ◆ AMS-TAC Future

- Alternatives
  - ◆ Web-enable in concert with client version (Navy/USMC venture)
  - ◆ Integration with W2W
  - ◆ Integration into CMOS
- Capabilities Based Assessment Team (CBAT) vision
- More Users MLG
- Functionality tradeoffs btw Services



# CMOS

- ❖ 7.0 in IA certification process
- ❖ 7.1 certification will start upon completion of 7.0 upgrade
- ❖ Everyone should be writing RFID Tags out of CMOS for Iraq Shipments (IAW Policy)
- ❖ Working keyboard readers vice scanners
- ❖ Working 2d Barcode for 1348's
- ❖ Training 5-9 Jun, ANG, Harrisburg, PA.
  - Aug class unfunded
  - AIT Lab setup possible for mid term solution
- ❖ SPI Refresh, 55 Desk 18 Laptops
- ❖ Web-enable, USTC CBAT initiative
- ❖ D-CMOS
  - ✓ Any issues ?



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

# Bridge Technology

# LTMITV-W2W

Last Tactical Mile In-Transit Visibility

*Warehouse to*



## W2W Background

### ◆ I MEF creation

- Late Summer 2003 - SYTEX (Prime Vendor/Systems integrator)
- Deployed to Iraq

### ◆ II MEF transitioned deployment and refined W2W material solution and business process

### ◆ MARCORSYSCOM assumed program management responsibilities in Aug 05



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

W2W

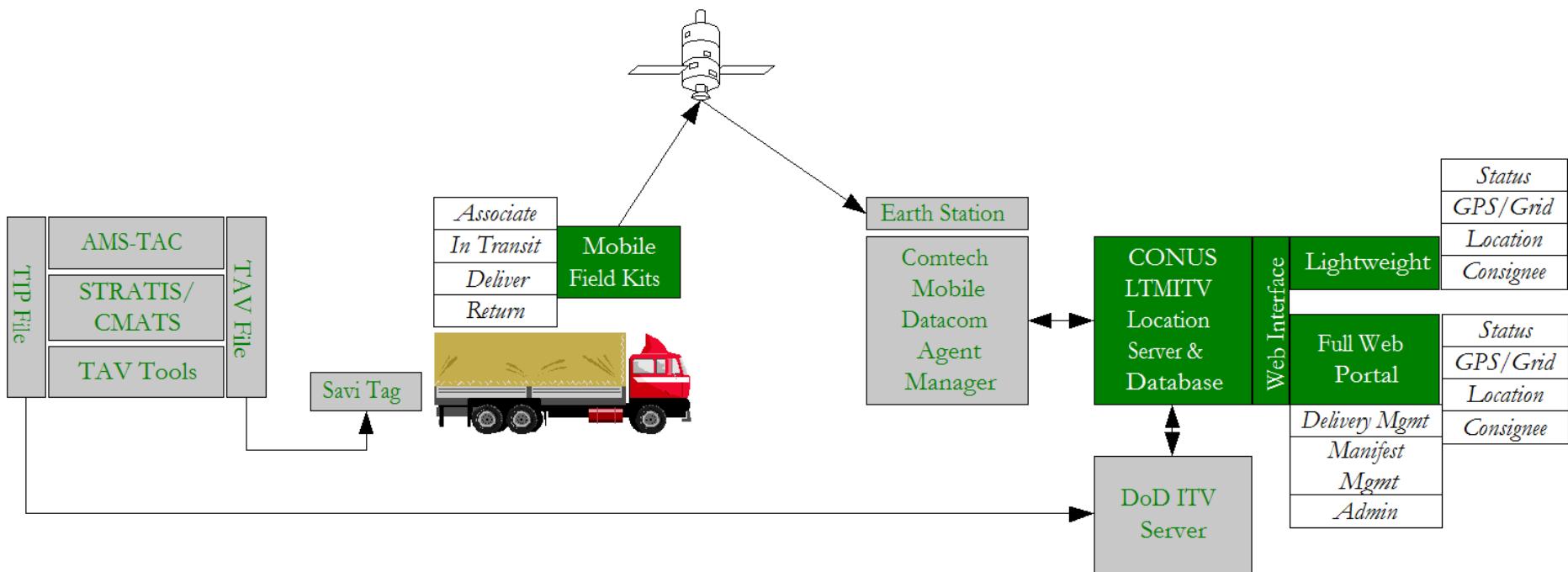
- ◆ Last-Mile' visibility of supplies forward
- ◆ Non-nodal location updates.
  - Not dependent on nodal interrogators
- ◆ Electronic capture of consignee data at delivery point
- ◆ Automated generation of AS1/AS2 transactions



# MARINE CORPS SYSTEMS COMMAND

## UNITED STATES MARINE CORPS

# W2W





MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

# W2W Principle Items

## ◆ Server

## ◆ Mobile Kit

- ◆ Computer (Laptop/tablet)
- ◆ Transceiver
- ◆ Cable Assembly
- ◆ Power Supply

No difference btw Base Unit Kit or Mobile Kit just how it is employed



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS



# W2W Functional Overview

## ◆ Server

- Receives and parses TIP files or content level detail from ITV
- From Base Unit Kit or Mobile Kit
  - ◆ Receives location (GPS) updates
  - ◆ Receives camp drop, RUC pickup and RUC delivery data
- Provides rich query and lightweight query alternatives via web interface
- Sends AS1 and AS2 80 card column courier file updates to USMC server for consumption based on in-garrison and theatre business rules



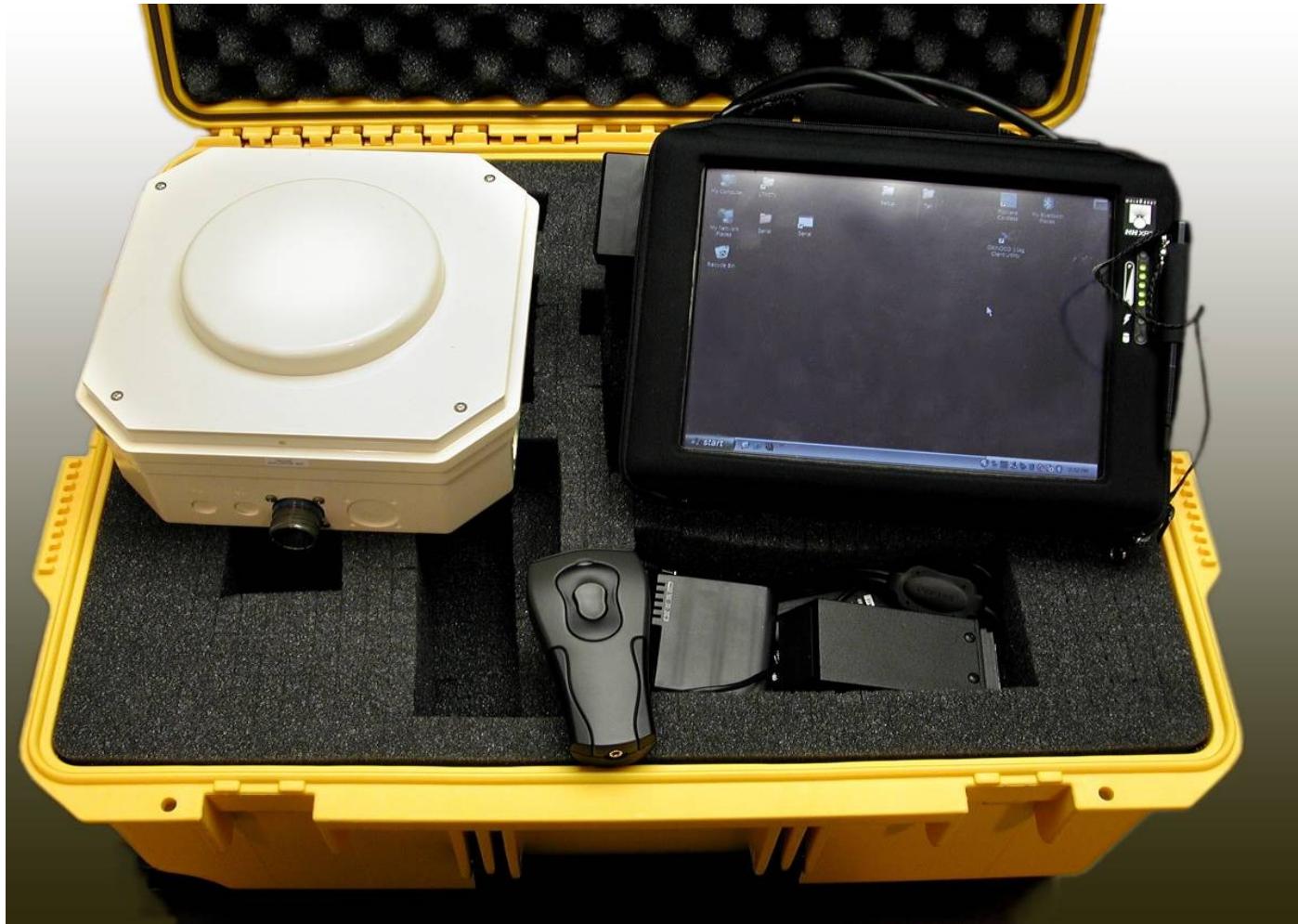
# W2W Functional Overview

## ◆ Base Unit Kit or Mobile Unit Kit

- Computer with Visibility Tracking Program (VTP)
- At delivery preparation - input of PDC, AAC and Tag ID
- At Camp Drop, RUC Pickups and End RUC Deliveries
  - ◆ Mobile Unit Kit - GPS updates and input of Tag ID and Consignee data
  - ◆ Base Unit Kit - input of Tag ID and Consignee data



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS





MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS



- ◆ Visibility Tracking Program
- ◆ Software application that runs on Tablet PC, which is part of a Field Kit
  - A few touch screen, most pen-based
  - Pen-based provide brighter screens
  - Includes graphic keyboard pop-up to allow entry of name/textual data via keyboard
  - Pen-based also provides additional means of handwriting recognition for input



# MARINE CORPS SYSTEMS COMMAND

## UNITED STATES MARINE CORPS

W2W

VTP Main Menu

### Last Tactical Mile In Transit Visibility

Warehouse to Warfighter Version 1.0.1858.24279

Status	FIELD KIT #: 99999	LOCAL TIME: 1603	ZULU TIME: 2103
	GRID: [NO FIX]	LATITUDE: [NO FIX]	LONGITUDE: [NO FIX]

**System Check** < Tests for VTP Readiness

**Start Route** < START a New Delivery Session (Prepare for your Route)

**RUC Delivery** < DELIVER Gear to Consignee RUC

**Camp Drop** < DROP Gear at Intermediate Location (NOT to Consignee)

**End Route** < END the Current Delivery Session

**Help** < Documentation and Help for the VTP

**Transceiver Load**



- ◆ Correlates delivery manifest data and Tag IDs with a field kit that is placed within a delivery/convoy vehicle
- ◆ Provides a means to query the location and current status of materiel pushed from SMU/TMO forward via a web enabled interface
- ◆ Can be configured 2 ways:
  - Mobile unit on each supply convoy from warehouse
    - ◆ Direct RUC delivery - AS2 (D6T)
    - ◆ Intermediate camp drop - AS1
  - Fixed system at each camp
    - ◆ Capture subsequent RUC pickup from camp - AS2 (D6T)

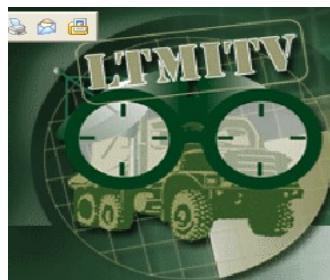


- ◆ Relies on satellite transceiver and GPS to communicate data to Location Server
  - Designed to use minimal bandwidth
  - Same transceivers as MTS and BFT
  - Provides robust seamless satellite data communications to ensure data that is sent up is not 'lost in the ether'
  - All communications between Field Kit and Satellite are encrypted
- ◆ Does not depend on a localized server
- ◆ Laptop does not use mapping software- it is purely an input/filter for data up to the Location Server



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

W2W



## LAST TACTICAL MILE IN TRANSIT VISIBILITY

*Warehouse to Warfighter*

**Log In**

Username:

Password:

**Login**

- [\*I meant to go to the DoD ITV web site\*](#)
- [\*I am a Using Unit with low bandwidth but would like to query LTMITV\*](#)



# MARINE CORPS SYSTEMS COMMAND

## UNITED STATES MARINE CORPS

# W2W

LTMIV - Query - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

DoD ITV Server LTMIV Lightweight LTMIV Log Out

## LAST TACTICAL MILE IN TRANSIT VISIBILITY

Warehouse to Warfighter

Query Manifest View Delivery Mgmt Admin

RUC TAG	TCN	Items	Status	Last Position	Last Updated
<a href="#">MMX200 000000</a>	MMC10041710005XXX	13	Closed	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	2/3/2005 6:06:08 PM
Document Number	NSN		Nomenclature		UI QTY RIC
<a href="#">MMX20051690001</a>	<a href="#">5999010321692</a>		ACCESSORY MAINT KIT TELE		EA 00003 MC1
MMX20051690002	6625010906789		ADAPTER,TEST,POWER SUPPLY		EA 00004 MC1
MMX20051690003	5895012509557		CONVERTER,MODEM,SI		EA 00005 MC1
MMX20051690004					
MMX20051690005					
MMX20051690006					
MMX20051690007					
MMX20051690008					
MMX20051690009					
MMX20051690010					
MMX20051690011					
MMX20051690012					
MMX20051690013					

TagHistory - Microsoft Internet Explorer provided by AT&T WorldNet Service

TAG: 000004

Log Date	Position	Status
2/3/2005 6:17:37 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Closed
2/3/2005 6:17:36 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Delivered
2/3/2005 6:12:26 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Camp DropOff
2/3/2005 6:09:56 PM		In Transit
		Waiting for Details
		Pending

start C. 2 P. R. C. >> My Documents >> > 1:54 PM Thursday



# MARINE CORPS SYSTEMS COMMAND

## UNITED STATES MARINE CORPS

# W2W

home - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

Back Search Favorites Media Go

Address http://ltmitv.sytexinc.com/LTMITVLW/

Search Manifest DOC NUMBER: M2832143347281 NSN:   
Tag ID:  RUC:   
TCN:

Search Reset

home - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

Back Search Favorites Media Go

Address http://addemo1.sytexinc.com/ltmitvlw/home.aspx

Search Manifest DOC NUMBER: M2832143347281 NSN:   
Tag ID:  RUC:   
TCN:

Search Reset

RUC TAG	TCN	Items	Status	Last Position	Last Updated
M28321 730764	M283214336T730764	17	Closed	33.35 N 117.41 W 61851 90164	12/2/2004 5:40:12 PM
Document Number	NSN		Nomenclature	UI	QTY RIC
M2832143347281	2540014957611		SEAL,UPPER DOOR HIN	EA	00001 MC1
M2832143347291	2930014956890		FAN OPERATOR	EA	00001 MC1
M2832143356334	5330009668657		PACKING ASSORTMENT,	EA	00001 MC1
M2832143356336	5975005709598		STRAP,TIEDOWN,ELECT	HD	00001 MC1
M2832143356338	5970004194291		TAPE,INSULATION,ELE	RO	00001 MC1
M2832143356339	5940005250907		TERMINAL KIT	KT	00001 MC1
M2832143356354	6150010270125		CABLE ASSEMBLY,SPEC	EA	00001 MC1
M2832143356355	4820013988314		VALVE,CHECK	EA	00002 MC1
M2832143356390	6240001433070		LAMP,INCANDESCENT	EA	00004 MC1
M2832143356391	6240001536494		LAMP,INCANDESCENT	EA	00004 MC1
M2832143357323	5340012658911		HANDLE,DOOR	EA	00001 MC1
M2832143357329	5340011553798		LEVER,MANUAL CONTRO	EA	00001 MC1
M2832143357330	5310009752075		NUT,PLAIN,HEXAGON	HD	00001 MC1
M2832143357331	5340009850823		CLEVIS,ROD END	EA	00001 MC1
M2832143357332	5315008423044		PIN,COTTER	HD	00001 MC1

start Camp Pendleton... 4 Internet Expl... Internet

2:52 PM Monday

## Lightweight Query



**MARINE CORPS SYSTEMS COMMAND**  
**UNITED STATES MARINE CORPS**

# Quick User Guides

Last Tactical Mile In Transit Visibility			Itmtysupport@syxinc.com	Quick User Guide
			ER GUIDE	
PREPARATION	1	Gear Up	 <p>A. Check to see if you have all that you need from a field kit (see other side).  <input type="checkbox"/> Tablet   <input type="checkbox"/> Barcode   <input type="checkbox"/> Cables   <input type="checkbox"/> Transceiver   <input type="checkbox"/> Inverter   <input type="checkbox"/> OR Portable Power</p>	
	2	Power Up	 <p>B. Load field kit on the vehicle, including transceiver placement and power connections. Power on the tablet PC if not done so already. Click the barcode scanner to "awaken" it.</p> <p>C. At the desktop, launch <b>Fileware</b> to connect the barcode reader, and launch the <b>LTMIV Client Application</b> if not up already.</p> <p>D. Run the <b>System Check</b> on the VTP (LTMIV Client Application). (See <a href="#">other side</a>)</p>	
	3	Capture	 <p>E. If the TIP file for any of these was generated by AMS-TAC, ensure the TIP file has been sent to the LTMIV server.</p> <p>F. At the tablet PC, in the LTMIV client application, click on <b>Start Route</b>. Depart vehicle.</p> <p>G. Scan the Savi tag license plate barcode <b>on the tag itself</b> for each tagged pallet/container to be delivered. A beep indicates a successful scan. (See <a href="#">other side</a>).</p> <p>H. Press <b>Done</b> when you have finished scanning tag IDs and verification of tag list/count.</p> <p>I. Enter rank name, and convoy tasker ID for this delivery session and press <b>Accept</b>.</p> <p>J. Check the screen to ensure all data is correct, then press <b>Start</b>, and <b>OK</b>.</p>	
	4	Head Out	 <p>K. <b>Transceiver Load</b> status bar shows the data load to be sent to LTMIV.</p> <p>L. VTP running from the tablet PC will send GPS/grid updates to LTMIV at predefined intervals while en route. Position data is at the top of the VTP screen.        GRID: 59134 27384   LATITUDE: 87.98 N   LONGITUDE: 176.00 W   (<a href="#">See <b>other side</b></a>)</p>	
	5	Delivery to RUC Consignee OR Camp Drop (not to consignee)	 <p>When delivering to a RUC consignee:</p> <p>M. Click <b>RUC Delivery</b>. <b>Scan only the Tag ID</b> barcode(s) of all items to be delivered.</p> <p>N. When you have returned to the VTP and the IDs have uploaded, click <b>Date</b>.</p> <p>O. Enter consignee data from the signed manifest. Press <b>Accept</b> and then <b>OK</b> when completed. Continue to next delivery/drop. If this was the last stop, go to #6 below.</p>	
	6	When dropping at an intermediate location:	 <p>L. Click <b>Camp Drop</b>. <b>Scan only the Tag ID barcodes</b> of all tagged items just delivered.</p> <p>M. When you have returned to the VTP and the IDs have uploaded, click <b>Date</b>.</p> <p>N. Enter the camp name and click <b>Accept</b>. Continue to next delivery/drop. If this was the last stop, go to #6 below.</p> <p>O. After the last delivery/drop, no other action on the tablet PC is required until you have returned to origin. This allows tracking of the delivery asset back to its origin.</p> <p>P. Upon return to origin, click <b>End Route</b>. VTP will indicate if all tags have been accounted for. If so, click <b>OK</b>. If not, you will be asked to <b>reconcile remaining tags</b>. Indicate consignee for delivered tags, and location for camp dropped tags.</p> <p>Q. Once you are finished reconciling tags, click <b>OK</b>. Once the <b>Transceiver Load</b> bar empties, another delivery route can be run, or the application can be closed and tablet PC shut down.</p>	
	7	RUC Pickup from Camp	 <p>This step only applies to Field Kits that are configured as <b>FIXED</b> and situated at intermediate delivery points (not for delivery vehicles). For a RUC pickup:</p> <p>A. Press <b>RUC Pickup</b>. Enter consignee information and press <b>Accept</b>.</p> <p>B. <b>Scan multiple Tag ID</b> barcodes of all items just picked up.</p> <p>C. Click <b>Done</b>, Click <b>Yes</b>, then <b>OK</b>.</p>	
FIXED KIT			<p>If VTP or the LTMIV Client Application, closes after being launched, or during a delivery session, check the power connection and make sure the USB data connection to the tablet PC.</p> <p>If VTP or the LTMIV Client Application, closes after being launched, or during a delivery session, check the power connection and make sure the USB data connection to the tablet PC.</p>	
			<p><b>Tablet PC Barcode Scanner</b></p>  <p>To 12 VDC Cigarette Adapter on 24 VDC MATO Slave Port</p> <p>For Tablet PC</p> <p>Bar code integration box</p> <p>Transceiver</p> <p>Cables &amp; Inverter</p>	
			<p><b>Scanned in properly. From START ROUTE, Delivery or Camp Drop screen:</b></p> <p>The tag IDs:</p> <p>her, it will acknowledge with an audible 'beep', the scanner loses connection with the tablet PC, it will return back within range (indicated by 3 quick tones), will be uploaded and added to the list of scanned tags.</p> <p><b>Reset Scan</b> to clear the current ITV Tag. Red Tags' list has already been uploaded on the VTP to the ITV Tag Number Field if you need to scan more barcodes.</p> <p><b>en keyboard</b> bottom left of the tablet desktop to enter or correct data.</p> <p><b>route. From the main screen:</b></p> <p>E) is started and is</p> <p>GRID: (OFF) LATITUDE: (OFF) LONGITUDE: (OFF)</p> <p>id, Latitude &amp; Longitude are</p> <p>GRID: 59134 27384 LATITUDE: 87.98 N LONGITUDE: 176.00 W</p> <p>er load goes down after several minutes.</p> <p>me, be patient, as the GPS and/or difficulty locking on to a signal.</p> <p><b>talk to the transceiver, the application will close after warning the user.</b></p>	



## Next Steps

- ◆ Continue to assess operational use
- ◆ Continue in-theatre fielding and assessment
- ◆ Field Kits to all 3 MEF's for Training Base
- ◆ Determine additional requirements
- ◆ Conduct Requirements Board for seamless distribution process (AMS/W2W ?)
- ◆ Future minor releases
- ◆ Passive RFID options
- ◆ Smaller footprint (Handheld)
- ◆ Converge with other SatCom providers
- ◆ MCEITS, IA Process



# What it all Means

- ❖ Visibility from Warehouse to Warfighter
- ❖ Robust COTS platform
- ❖ Simplified approach
  - Uses pre-positioned data
  - Economic use of bandwidth
- ❖ Not intended as another stovepipe
- ❖ Reusable platform to solve real problems right now...
  - ❖ ...while recognizing that change is inevitable with:
    - Increased use and feedback
    - Technology trends and adoption
    - Standards, policy and directive evolution



MARINE CORPS SYSTEMS COMMAND  
UNITED STATES MARINE CORPS

# Questi



# Transportation and Distribution Information Systems (TDIS) Program Office

*Thank  
You!*